

REMARKS

Status

Claim 17 has been amended to recite dependency on claims 1 and 5. No new matter has been introduced. Entry and consideration of the amendments are respectfully requested.

Response to Claim Rejections - 35 U.S.C. §103

A. Claims 1, 6, 8-19, and 51-53 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kiuchi et al (WO 01/42360 or US Pat No. 6,730,402 or US 2003/0152776).

B. Claim 5 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kiuchi et al (WO 01/42360 or US Patent No. 6,730,402 or US 2003/0152776) in view of Nakamura et al (US Patent No. 6,645,630).

C. Claim 7 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kiuchi et al (WO 01/42360 or US Patent No. 6,730,402 or US 2003/012776) in view of Takada et al (JP 2002-241590).

Applicant respectfully traverses.

The present invention is directed to an epoxy resin composition that includes a combination of an epoxy resin (A) and an epoxy resin curing agent (B) in which the epoxy resin curing agent (B) includes a phenol resin (F) represented by one of general formulas (3) to (8) containing at least one of structural units X and Y represented by general formulas (1) and (2), respectively; and

the epoxy resin (A) includes an epoxy compound (G) represented by one of general formulas (12) to (16) and containing at least one of structural units X' and Y' represented by general formulas (9) and (10), respectively.

More particularly, because the phenol resin (F) is specified by $10 < n < 75$, and because the epoxy resin (A) is specified by $n=0$ to 10, the epoxy resin composition has advantages including superior heat resistance indicated by glass transition temperature and adhesion to a mat surface of copper foil.

Kiuchi discloses an epoxy resin compound including a phenol resin and an epoxy resin, both of which have a weight average molecular weight of 300-10000. Furthermore, Kiuchi describes that the phenol resins and the epoxy resin are represented by general formulas (1) to (7), in which $n=0$ to 10.

On the other hand, in the present invention, a value n of the phenol resin is represented by $10 < n < 75$, which is different from Kiuchi's n value. That is, Kiuchi neither teaches nor suggests that a combination of the phenol resin (F) specified by $10 < n < 75$ and the epoxy resin (A) specified by $n=0$ to 10 makes the epoxy resin composition to have superior heat resistance indicated by glass transition temperature and adhesion to a mat surface of copper foil.

Moreover, Nakamura and Takeda neither teach nor suggest that a combination of the phenol resin (F) specified by $10 < n < 75$ and the epoxy resin (A) specified by $n=0$ to 10 makes the epoxy resin composition to have superior heat resistance indicated by glass transition temperature and adhesion to a mat surface of copper foil.

Reconsideration and withdrawal of the rejection are respectfully requested.

Response to Double Patenting Rejections

A. Claims 1, 6, 8-19, and 51-53 are rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over the combined limitations of claims 27-29, 36-39, 58-66 and 69 of U.S. Patent No. 6,730,402.

B. Claim 5 is rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over the combined limitations of claims 27-29, 36-39, 58-66 and 69 of U.S. Patent No. 6,730,402 in view of Nakamura et al (US Patent No. 6,645,630).

C. Claim 7 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 27-29, 36-39, 58-66 and 69 of US Patent No. 6,730,402 in view of Takada et al (JP 2002-241590).

Applicant requests that the Examiner hold the double patenting rejections in abeyance pending resolution of all other issues related to the patentability of the claims, and reserves the right to amend the claims or file a terminal disclaimer at a later date.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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WASHINGTON OFFICE

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CUSTOMER NUMBER

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